1600

#16
CDessen
8/14/02

p.6

RAW SEQUENCE LISTING   DATE: 08/02/2002
PATENT APPLICATION: US/09/399,003   TIME: 12:12:31

Input Set : A:\PTO.VSK.txt
Output Set: N:\CRF3\08022002\I399003.raw

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 3 <110> APPLICANT: Hogrefe, Holly
 4        Hansen, Connie J
 6 <120> TITLE OF INVENTION: Polymerase Enhancing Factor (PEF) Extracts, PEF Protein
Complexes,
 7        Isolated PEF Proteins, and Methods for Purifying and Identifying
 9 <130> FILE REFERENCE: 4121.0116-02
11 <140> CURRENT APPLICATION NUMBER: US 09/399,003
12 <141> CURRENT FILING DATE: 1999-09-20
14 <150> PRIOR APPLICATION NUMBER: PCT/ US98/05497
15 <151> PRIOR FILING DATE: 1998-03-20
17 <150> PRIOR APPLICATION NUMBER: US 08/957,709
18 <151> PRIOR FILING DATE: 1997-10-24
20 <150> PRIOR APPLICATION NUMBER: US 08/822,774
21 <151> PRIOR FILING DATE: 1997-03-21
23 <160> NUMBER OF SEQ ID NOS: 89
25 <170> SOFTWARE: PatentIn version 3.1
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 15
29 <212> TYPE: PRT
30 <213> ORGANISM: Pyrococcus furiosus
32 <220> FEATURE:
33 <221> NAME/KEY: misc_feature
34 <222> LOCATION: (1)..(15)
35 <223> OTHER INFORMATION: "X" represents any amino acid
38 <400> SEQUENCE: 1
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41 1               5                   10                  15
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45 <211> LENGTH: 15
46 <212> TYPE: PRT
47 <213> ORGANISM: Pyrococcus furiosus
49 <220> FEATURE:
50 <221> NAME/KEY: misc_feature
51 <222> LOCATION: (1)..(15)
52 <223> OTHER INFORMATION: "X" represents any amino acid
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58 1               5                   10                  15
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62 <211> LENGTH: 35
63 <212> TYPE: PRT
64 <213> ORGANISM: Pyrococcus furiosus
66 <220> FEATURE:
67 <221> NAME/KEY: MISC_FEATURE
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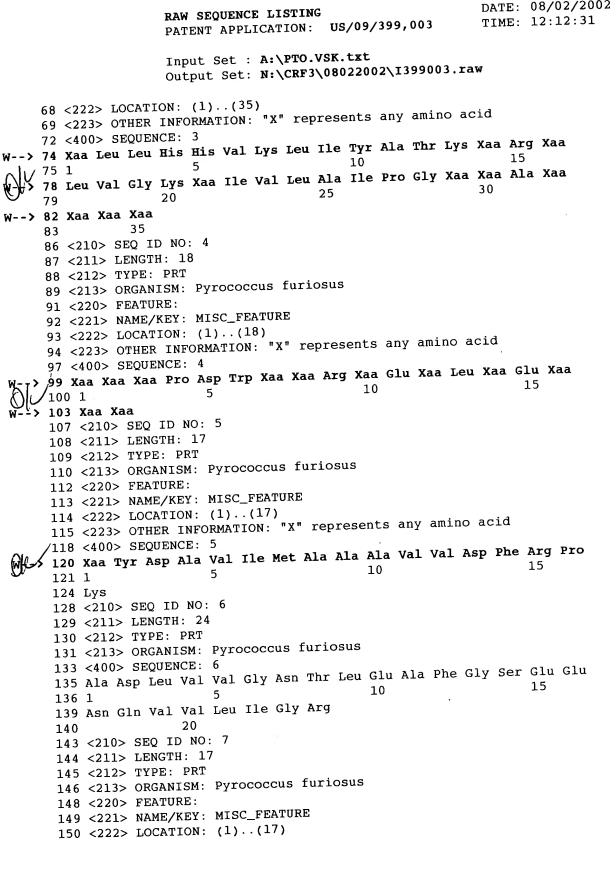
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 68 <222> LOCATION: (1)..(35)
 69 <223> OTHER INFORMATION: "X" represents any amino acid
 72 <400> SEQUENCE: 3
 74 Xaa Leu Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Xaa Arg Xaa
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 78 Leu Val Gly Lys Xaa Ile Val Leu Ala Ile Pro Gly Xaa Xaa Ala Xaa
 79              20              25              30
 82 Xaa Xaa Xaa
 83             35
 86 <210> SEQ ID NO: 4
 87 <211> LENGTH: 18
 88 <212> TYPE: PRT
 89 <213> ORGANISM: Pyrococcus furiosus
 91 <220> FEATURE:
 92 <221> NAME/KEY: MISC_FEATURE
 93 <222> LOCATION: (1)..(18)
 94 <223> OTHER INFORMATION: "X" represents any amino acid
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 99 Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Arg Xaa Glu Xaa Leu Xaa Glu Xaa
100 1               5               10              15
103 Xaa Xaa
107 <210> SEQ ID NO: 5
108 <211> LENGTH: 17
109 <212> TYPE: PRT
110 <213> ORGANISM: Pyrococcus furiosus
112 <220> FEATURE:
113 <221> NAME/KEY: MISC_FEATURE
114 <222> LOCATION: (1)..(17)
115 <223> OTHER INFORMATION: "X" represents any amino acid
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120 Xaa Tyr Asp Ala Val Ile Met Ala Ala Ala Val Val Asp Phe Arg Pro
121 1               5               10              15
124 Lys
128 <210> SEQ ID NO: 6
129 <211> LENGTH: 24
130 <212> TYPE: PRT
131 <213> ORGANISM: Pyrococcus furiosus
133 <400> SEQUENCE: 6
135 Ala Asp Leu Val Val Gly Asn Thr Leu Glu Ala Phe Gly Ser Glu Glu
136 1               5               10              15
139 Asn Gln Val Val Leu Ile Gly Arg
140              20
143 <210> SEQ ID NO: 7
144 <211> LENGTH: 17
145 <212> TYPE: PRT
146 <213> ORGANISM: Pyrococcus furiosus
148 <220> FEATURE:
149 <221> NAME/KEY: MISC_FEATURE
150 <222> LOCATION: (1)..(17)
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151 <223> OTHER INFORMATION: "X" represents any amino acid
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157 1   5   10   15
160 Lys
164 <210> SEQ ID NO: 8
165 <211> LENGTH: 18
166 <212> TYPE: PRT
167 <213> ORGANISM: Pyrococcus furiosus
169 <220> FEATURE:
170 <221> NAME/KEY: misc_feature
171 <222> LOCATION: (1)..(18)
172 <223> OTHER INFORMATION: "X" represents any amino acid
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177 Gly Ala Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Xaa Xaa
178 1   5   10   15
181 Arg Lys
185 <210> SEQ ID NO: 9
186 <211> LENGTH: 13
187 <212> TYPE: PRT
188 <213> ORGANISM: Pyrococcus furiosus
190 <400> SEQUENCE: 9
192 Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Leu
193 1   5   10
196 <210> SEQ ID NO: 10
197 <211> LENGTH: 16
198 <212> TYPE: PRT
199 <213> ORGANISM: Pyrococcus furiosus
201 <220> FEATURE:
202 <221> NAME/KEY: MISC_FEATURE
203 <222> LOCATION: (1)..(16)
204 <223> OTHER INFORMATION: "X" represents any amino acid
207 <400> SEQUENCE: 10
209 Gly Xaa Xaa Xaa Pro Asp Trp Xaa Xaa Lys Phe Arg Lys Glu Glu Ser
210 1   5   10   15
213 <210> SEQ ID NO: 11
214 <211> LENGTH: 17
215 <212> TYPE: PRT
216 <213> ORGANISM: Pyrococcus furiosus
218 <400> SEQUENCE: 11
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221 1   5   10   15
224 Glu
228 <210> SEQ ID NO: 12
229 <211> LENGTH: 16
230 <212> TYPE: PRT
231 <213> ORGANISM: Pyrococcus furiosus
233 <220> FEATURE:
234 <221> NAME/KEY: MISC_FEATURE

RAW SEQUENCE LISTING
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235 <222> LOCATION: (1)..(16)
236 <223> OTHER INFORMATION: "X" represents any amino acid
239 <400> SEQUENCE: 12
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242 1   5   10   15
245 <210> SEQ ID NO: 13
246 <211> LENGTH: 18
247 <212> TYPE: PRT
248 <213> ORGANISM: Pyrococcus furiosus
250 <400> SEQUENCE: 13
252 Met Leu Tyr Leu Val Arg Pro Asp Trp Lys Arg Arg Lys Glu Ile Leu
253 1   5   10   15
256 Ile Glu
260 <210> SEQ ID NO: 14
261 <211> LENGTH: 23
262 <212> TYPE: DNA
263 <213> ORGANISM: Artificial Sequence
265 <220> FEATURE:
266 <223> OTHER INFORMATION: synthetic
268 <400> SEQUENCE: 14
269 caycaygaha arythattta cgc   23
272 <210> SEQ ID NO: 15
273 <211> LENGTH: 23
274 <212> TYPE: DNA
275 <213> ORGANISM: Artificial Sequence
277 <220> FEATURE:
278 <223> OTHER INFORMATION: synthetic
280 <220> FEATURE:
281 <221> NAME/KEY: misc_feature
282 <222> LOCATION: (1)..(23)
283 <223> OTHER INFORMATION: "n" is a, t, g, or c
286 <400> SEQUENCE: 15
287 gccatdatna cdgcrtcgta ttt   23
290 <210> SEQ ID NO: 16
291 <211> LENGTH: 23
292 <212> TYPE: DNA
293 <213> ORGANISM: Artificial Sequence
295 <220> FEATURE:
296 <223> OTHER INFORMATION: synthetic
298 <400> SEQUENCE: 16
299 caycaygaha arythatata cgc   23
302 <210> SEQ ID NO: 17
303 <211> LENGTH: 20
304 <212> TYPE: DNA
305 <213> ORGANISM: Artificial Sequence
307 <220> FEATURE:
308 <223> OTHER INFORMATION: synthetic
310 <400> SEQUENCE: 17
311 ardacdacyt grttttcttc   20

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/399,003

Input Set : A:\PTO.VSK.txt
Output Set: N:\CRF3\08022002\I399003.raw

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314 <210> SEQ ID NO: 18
315 <211> LENGTH: 1209
316 <212> TYPE: DNA
317 <213> ORGANISM: Pyrococcus furiosus
319 <220> FEATURE:
320 <221> NAME/KEY: misc_feature
321 <222> LOCATION: (1)..(1209)
322 <223> OTHER INFORMATION: "n" is a, t, g, or c
325 <400> SEQUENCE: 18
326 atgcttcacc acgtcaagct aatctacgcc acaaaaagtc gaaagctagt tggaaaaaag     60
328 atagtcnnnn nnnnnccagg gagtattgcg gctttggatg tgaaagcttg tgagggacta    120
330 attaggcatg gggccgaagt tcatgcagtg atgagtgagg cagccaccaa gataattcat    180
332 ccttatgcat ggaatttgcc cacgggaaat ccagtcataa ctgagatcac tggatttatc    240
334 gagcatgttg agttagcagg ggaacatgag aataaagcag atttaatttt ggtttgtcct    300
336 gccactgcca acacaattag taagattgca tgtggaatag atgatactcc agtaactaca    360
338 gtcgtgacca cagcatttcc ccacattcca attatgatag ccccagcaat gcatgagaca    420
340 atgtacaggc atcccatagt aagggagaac attgaaaggt taaagaagct tggcgttgag    480
342 tttataggac caagaattga ggagggaaag gcaaaagttg caagcattga tgaaatagtt    540
344 tacagagtta ttaaaaagct ccacaaaaaa acattggaag ggaagagagt cctagtaacg    600
346 gcgggagcaa caagagagta catagatcca ataagattca taacaaatgc cagcagtgga    660
348 aaaatgggag tagcgttggc tgaagaagca gatttagag gagctgttac cctcataaga    720
350 acaaagggaa gtgtaaaggc ttttagaatc agaaaaatca aattgaaggt tgagacagtg    780
352 gaagaaatgc tttcagcgat tgaaaatgag ttgaggagta aaaagtatga cgtagttatt    840
354 atggcagctg ctgtaagcga tttttaggcca aaaattaaag cagagggaaa aattaaaagc    900
356 ggaagatcaa taacgataga gctcgttccn nnnaatccca aaatcattga tagaataaag    960
358 gaaattcaac caaatgtctt tcttgttgga tttaaagcag aaacttcaaa agaaaagctt   1020
360 atagaagaag gtaaaaggca gattgagagg gccaaggctg acttagtcgt tggtaacaca   1080
362 ttggaagcct ttggaagcga ggaaaaccaa gtagtattaa ttggcagaga tttcacaaaa   1140
364 gaacttccaa aaatgaaaaa gagagagtta gcagagagaa tttgggatga gatagagaaa   1200
                                                                      1209
366 ttnctgtcc
369 <210> SEQ ID NO: 19
370 <211> LENGTH: 403
371 <212> TYPE: PRT
372 <213> ORGANISM: Pyrococcus furiosus
374 <220> FEATURE:
375 <221> NAME/KEY: MISC_FEATURE
376 <222> LOCATION: (1)..(403)
377 <223> OTHER INFORMATION: "X" represents any amino acid
380 <400> SEQUENCE: 19
382 Met Leu His His Val Lys Leu Ile Tyr Ala Thr Lys Ser Arg Lys Leu
383 1               5                   10                  15
386 Val Gly Lys Lys Ile Val Xaa Xaa Xaa Pro Gly Ser Ile Ala Ala Leu
387             20                  25                  30
390 Asp Val Lys Ala Cys Glu Gly Leu Ile Arg His Gly Ala Glu Val His
391         35                  40                  45
394 Ala Val Met Ser Glu Ala Ala Thr Lys Ile Ile His Pro Tyr Ala Trp
395     50                  55                  60
398 Asn Leu Pro Thr Gly Asn Pro Val Ile Thr Glu Ile Thr Gly Phe Ile
399 65                  70                  75                  80
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W--> 328

W--> 356

W--> 366

W--> 386

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 08/02/2002
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Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1,2,13,14,15
Seq#:2; Xaa Pos. 1,2,3,7,8,10,12,14,15
Seq#:3; Xaa Pos. 1,14,16,21,29,30,32,33,34,35
Seq#:4; Xaa Pos. 1,2,3,7,8,10,12,14,16,17,18
Seq#:5; Xaa Pos. 1
Seq#:7; Xaa Pos. 13
Seq#:8; Xaa Pos. 15,16
Seq#:10; Xaa Pos. 2,3,4,8,9
Seq#:12; Xaa Pos. 1,9,13
Seq#:15; N Pos. 9
Seq#:18; N Pos. 67,68,69,70,71,72,73,74,75,930,931,932,933,1203
Seq#:19; Xaa Pos. 23,24,25,311,401
Seq#:32; N Pos. 15
Seq#:33; N Pos. 15
Seq#:34; N Pos. 15
Seq#:35; N Pos. 15
Seq#:36; N Pos. 20,66
Seq#:37; Xaa Pos. 12,22
Seq#:38; Xaa Pos. 7,22
Seq#:39; Xaa Pos. 7,9
Seq#:41; Xaa Pos. 1
Seq#:42; N Pos. 665,684,686,697,699,700,703,740
Seq#:43; Xaa Pos. 7,9,14,24,26,30,50,52,64,76,78,96,118,121,134,139,153,209
Seq#:43; Xaa Pos. 213,221,228,232,233,234,237,246
Seq#:44; Xaa Pos. 105,129,198,206,215,222,225,228,229,232,233,234
Seq#:45; Xaa Pos. 43,60,110,117,155,162,170,180,195,222,227,229,233,234,235
Seq#:45; Xaa Pos. 243
Seq#:46; Xaa Pos. 23,24,25
Seq#:51; Xaa Pos. 84,85,86,87,88,97,98,99,100,154,155,180,181,182,183,184
Seq#:51; Xaa Pos. 185,287,288,290,311,322,323,324,325,333,348,389,390,417
Seq#:51; Xaa Pos. 434,435,436,437
Seq#:52; Xaa Pos. 104,105,106,107,144,145,173,197,198,294,295,340,368,369
Seq#:52; Xaa Pos. 370,371
Seq#:53; Xaa Pos. 1,3,4,6,7,8,9,11,12,13,14
Seq#:72; Xaa Pos. 1,3,4,6,7,8,10,11,12,13